Case 2779

Ichthyosaurus trigonus Owen, 1840 (currently *Macropterygius trigonus*; Reptilia, Ichthyopterygia): proposed replacement of neotype by rediscovered holotype

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Abstract. The purpose of this application is to replace the neotype (now missing) of the Upper Jurassic ichthyosaur *Ichthyosaurus trigonus* Owen, 1840 by the holotype which has recently been found in the Benett collection at the Academy of Natural Sciences of Philadelphia.

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1. Owen (1840, p. 124) established the species *Ichthyosaurus trigonus* based on a single vertebral centrum from the Kimmeridge Clay (Upper Jurassic) at Westbrook in Bromham, Wiltshire. He gave a detailed description but did not figure the specimen which had been loaned to him by Miss Etheldred Benett of Norton House, near Warminster, Wiltshire. Upon the death of Benett in 1845, her collection was divided and sold. Most of the collection was purchased by Thomas B. Wilson of Wilmington, Delaware, U.S.A., who donated it to the Academy of Natural Sciences between 1848 and 1852. Although the transfer of the Benett Collection to Wilson and the Academy had been noted in contemporary literature in England, knowledge of its disposition soon became unclear and it was thereafter said in the literature to be lost (for details see Spamer, Bogan & Torrens, 1989).

2. Phillips (1871, pp. 335–337) described *I. trigonus* and figured (diagrams cxxvi–cxxviii) sketches of anterior and side views of vertebrae from the Kimmeridge Clay. Phillips cited two 'principal localities' for the occurrence of *I. trigonus*, Shotover and Swindon, but there is no indication in his description and figure captions of *I. trigonus* whether the illustrated specimens were from more than one locality (or even from Shotover or Swindon) or from more than one individual.

3. Lydekker (1889, p. 22) remarked that the type specimen of *Ichthyosaurus trigonus* could not be found: 'This species was founded upon vertebrae [sic] from the Kimmeridge Clay, which are not now forthcoming; and it will be convenient to regard those figured by Phillips in his *Geology of Oxford* as representing the types'. This publication by Lydekker satisfies the requirements for the designation of a neotype specimen (Article 75 of the Code), including citation of the repository — the University Museum, Oxford (by indication to Phillips, 1871, pp. vii–viii).

4. Woodward & Sherborn (1890, p. 241) accepted Lydekker's act of designating a neotype: 'Vertebrae; [location of type] unknown. (Lydekker regards the originals of Phillips' figures as types)'.

5. Huene (1922, pp. 92, 98, not Huene, 1923, as cited in Neave, 1940, p. 19) placed the species *Ichthyosaurus trigonus* Owen within the genus *Macropterygius*, a new genus therein erected by Huene. *Ichthyosaurus trigonus* is the type species of *Macropterygius*, by subsequent designation by Huene (1923, p. 465).

6. Delair (1960, pp. 63–65) discussed the species *Macropterygius trigonus* (Owen). He said about the type material (p. 64): 'Lydekker, who noted that the type vertebrae is [sic] not now forthcoming, proposed to regard the cervical, dorsal, and caudal vertebrae from the Kimmeridgian of Shotover and Swindon, figured in 1871 by Phillips as the types of Owen's species. It may be observed that Phillips's specimens constitute the oldest named material now available for study, and Lydekker's proposal may be adopted inasmuch that Phillips's vertebrae serve as the one reliable basis for further research on this form'.

7. In October 1988, a single vertebral centrum was found in the Vertebrate Paleontology systematic collection in the Academy of Natural Sciences of Philadelphia. Glued to the vertebra are two labels, both written in the hand of its collector, Etheldred Benett: '*Ichthyosaurus trigonis* [sic] (nova species) Dr. Owen' and 'Westbrook in Bromham Wilts.' An Academy label indicates that the specimen was 'B.C. 8' in the Benett Collection, a number that was applied by the packer of the collection when it was sent to T.B. Wilson. The specimen (now re-registered ANSP 10124) matches Owen's (1840) original description and measurements exactly. It was figured for the first time as Owen's original specimen (holotype) by Spamer, Bogan & Torrens (1989, p. 144, pl. 13, figs. 1a–c).

8. The Assistant Curator of the Geological Collections of the University Museum, Oxford (P. Powell, written communications to H.S. Torrens, 1989, 1990) reported that the neotype vertebrae of *Ichthyosaurus trigonus* have not been recognized in those collections, although the register of holdings contains listings of others of Phillips's (1871) figured and cited specimens.

9. There is little evidence to show whether the holotype and neotype specimens of *Ichthyosaurus trigonus* are or are not of the same species. It is clear that Phillips (1871) and Lydekker (1889) believed that the vertebrae they figured represented this species. Riabinin (1912, figs. 1, 2) figured additional vertebrae which he assigned to this species. Lydekker (1889, fig. 12) and other workers (Bauer, 1898, pp. 325–326; Sauvage, 1912, pp. 434–440, fig. on p. 437) applied this specific name also to other skeletal elements. Bauer (1898, p. 288, pls. 25–27) also placed *I. posthumus* Wagner, 1852 as a variety of *I. trigonus*. Delair (1960, p. 64) presented a taxonomic synonymy and discussion of *I. trigonus*.

10. Article 75h states that 'if, after the designation of a neotype, the holotype... of the nominal species-group taxon is found still to exist, the case is to be referred to the Commission to rule whether the neotype is or is not to be retained as the name-bearing type'. Since the neotype has been lost and the redicovered holotype has now been figured and is available for study, it would be desirable for the Commission to rule that the rediscovered holotype should replace the neotype.

11. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to suppress the neotype designation made by Lydekker (1889) of the specimen(s) figured by Phillips (1871, diagrams cxxvi–cxxviii) for *Ichthyosaurus trigonus* Owen, 1840;

(2) to place on the Official List of Specific Names in Zoology the name *trigonus* Owen, 1840, as published in the binomen *Ichthyosaurus trigonus* (specific name of the type species of *Macropterygius* Huene, 1922) and as defined by the holotype ANSP 10124.

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